

2008 Georgia Program and Data Summary

DIABETES



Diabetes is a common, serious, and costly disease, but it is controllable. In many cases, it is also preventable.

WHAT IS DIABETES?

Diabetes is a group of metabolic diseases marked by high blood glucose levels due to defects in insulin production, insulin action, or both. It is also associated with an excess glucose production from the liver. Diabetes can cause serious complications and premature death, but people with diabetes can take steps to control the disease and lower the risk of complications. In the United States, about 24 million Americans currently have diabetes.^{1,2} With proper disease management, a person with diabetes can still live and fully enjoy a healthy, productive life.

PROGRAM OVERVIEW

The mission of the Georgia Diabetes Prevention and Control Program (DPCP) is to reduce the burden of diabetes in Georgia by preventing disease onset, improving the standards of care for diabetes, and ensuring the well-being of those affected by diabetes. The DPCP has been receiving funding from the Centers for Disease Control and Prevention through a cooperative agreement since 1977. The program conducts a broad range of public health activities designed to promote knowledge and public awareness of diabetes and its salient risk factors; to reduce and prevent illness, disabilities, deaths, and costs related to diabetes and its complications; and to improve access to resources and services for people with diabetes. The DPCP strives to reach communities most affected by diabetes and achieve significant improvement in the quality of care and health status of Georgians with diabetes.

Types of Diabetes

Type 1 diabetes develops when the body's immune system destroys pancreatic beta cells—the only cells in the body that make the hormone insulin, which regulates blood glucose. To survive, people with type 1 diabetes must have insulin delivered by injection or a pump. Although disease onset can occur at any age, type 1 diabetes usually strikes children and young adults. Type 1 diabetes accounts for 5% to 10% of all diagnosed cases of diabetes.

Type 2 diabetes usually begins as insulin resistance, a disorder in which the body cells cannot use insulin properly. As the need for insulin rises, the pancreas gradually loses its ability to produce insulin. Type 2 diabetes is the most common form, accounting for 90% to 95% of all diagnosed cases of diabetes. It is also strongly associated with obesity and physical inactivity and is typically related to increasing age.³

Gestational diabetes (GDM) is a form of glucose intolerance first recognized in some women during pregnancy. Gestational diabetes occurs in 4% to 7% of pregnant women and is one of the most common medical complications of pregnancy.³ It can affect both the mother and the baby. Preeclampsia, spontaneous abortions, congenital malformations, and stillbirths are among the serious complications of diabetes during pregnancy. Soon after childbirth, 5% to 10% of women with GDM continue to have diabetes. Women who have had gestational diabetes have a 40% to 60% chance of developing diabetes, usually type 2 diabetes, in the next 5 to 10 years.¹

Other types of diabetes result from specific genetic conditions, surgery, drugs, malnutrition, infections, and other illnesses, accounting for 1% to 5% of all diagnosed cases.¹

Pre-diabetes, a precursor of diabetes, is a condition in which a person's blood glucose levels are higher than normal but not high enough to be diagnosed as diabetes. This reversible state of abnormal high blood sugar levels can be presented as either impaired fasting glucose, impaired glucose tolerance, or both. About 57 million Americans have pre-diabetes.^{1,2}

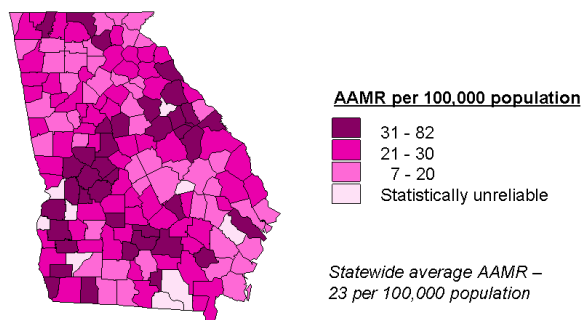
Diabetes is a common disease in Georgia.

- In 2007, approximately **700,000 (10.1%)** adults in Georgia had been diagnosed with diabetes.⁴
- For every two persons who have been diagnosed with diabetes, another has not yet been diagnosed. Thus, approximately **350,000** additional adult Georgians would have undiagnosed diabetes.
- Thousands more are at increased risk of getting diabetes because of advancing age, obesity, unhealthy eating habits, and physical inactivity.

Diabetes is a serious disease in Georgia.

- In 2006, diabetes was the seventh leading cause of death, killing **1,626** Georgians, equivalent to almost 5 deaths every day.
- For every death with diabetes as the primary cause, there were two other deaths in which diabetes was a contributing cause.
- In 2006, the overall age-adjusted diabetes death rate per 100,000 population was **20.2**. The rate was **1.3** times **higher** in men (**23.3**) than in women (**17.8**). The rate was also **2.3** times higher among blacks (**36.4**) than among whites (**16.1**).
- In 2006, more than one-third of diabetes deaths were in persons under the age of 65. The proportion of deaths before age 65 due to diabetes (premature deaths) was **highest** among black males (**53.7%**), followed by white males (**41.1%**), black females (**33.0%**), and white females (**26.6%**).⁵
- Georgia counties in the Southwest, South, Central, and Northeast regions had higher age-adjusted diabetes mortality rates than the statewide average from 1999 through 2006.⁵

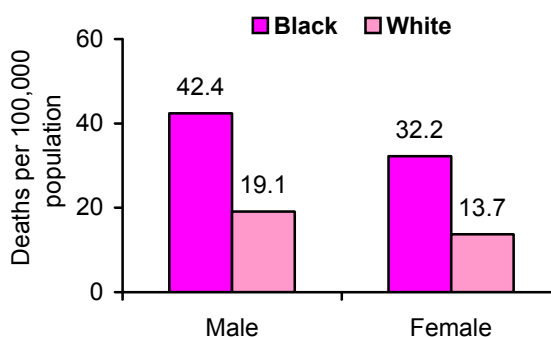
Age-adjusted mortality rates (AAMR) for diabetes by county
Georgia, 1999-2006



Signs and Symptoms of Diabetes

Frequent urination
Intense thirst
Extreme hunger
Tiredness
Blurred vision
Irritability
Unexplained weight loss or gain
Repeated infections
Slow wound healing
Dry, itchy skin
Tingling and numbness in hands or feet

Age-adjusted diabetes death rates by
race and sex, Georgia, 2006



Diabetes is a costly disease in Georgia.

- Diabetes can contribute to blindness, kidney failure, amputations, heart disease, stroke, high blood pressure, nerve damage, impotence, skin disorders, periodontal disease, pregnancy complications, disability, and premature death.
- In 2006, there were **15,593** hospitalizations for which diabetes was the principal diagnosis, resulting in over **\$288 million** hospital charges and about **78,346 days** or **215 years** of hospital stay.⁶
- Also in 2006, **19,459** emergency room visits in Georgia were attributable to preventable acute complications of diabetes such as severe hypoglycemia (low blood sugar levels). They required urgent care and cost more than **\$3.2 million** in medical care charges.⁷
- In Georgia, the cost of diabetes due to medical care, lost productivity, and premature death is estimated to be over **\$5.1 billion** per year.⁸

Symptoms of Hypoglycemia

Hunger	Dizziness	Sleepiness	Difficulty speaking
Shakiness	Headache	Tiredness	Clumsy movements
Sweating	Pale skin color	Anxiety	Confusion

Although there is no cure yet, diabetes is preventable and controllable.

- The health care cost for a person with diabetes is approximately **\$11,744** per year compared with **\$5,095** per year for a person of comparable age and sex without diabetes.⁹
- Many complications can be prevented with early detection, proper intervention and comprehensive management.

PREVENTIVE CARE MEASURES

- In 2007, adult Georgians with diabetes met only **one** national target (Healthy People 2010 Objective) for the recommended routine care for persons with diabetes, i.e., the annual A1C testing rate.

Status of recommended routine care for persons with diabetes, Georgia, 2007⁴

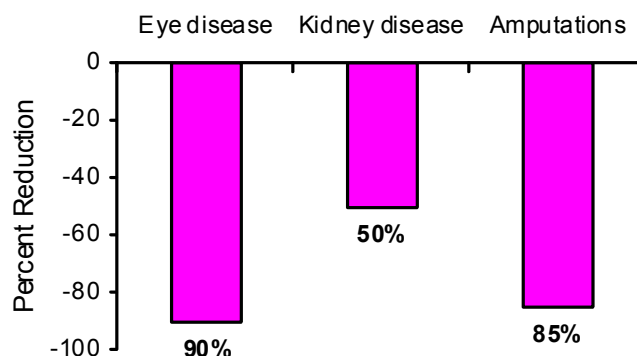
Minimum Recommendation	HP 2010 Objectives	Achievement
Annual doctor visit	---	86%
Diabetes education	60%	55%
Daily self glucose monitoring	60%	59%
Annual Hemoglobin A1c testing	50%	85%
Annual dilated eye exam	75%	71%
Annual foot exam	75%	69%
Annual influenza vaccination	60%	55%
Pneumococcal vaccination	60%	46%

Risk Factors for Developing Type 2 Diabetes

Physical inactivity
Obesity
Unhealthy eating habits
Sedentary lifestyles
Advancing Age
Family history of diabetes
Past history of gestational diabetes
Pre-diabetes
Hispanic, Black, Asian, Pacific Islander or American Indian

Remember, diabetes is controllable. Take charge of your diabetes. For Life.

Percent of diabetes complications that could be reduced or prevented*



*Adapted from Diabetes At A Glance, CDC, 2005.

- Each year, according to the Centers for Disease Control and Prevention, **12,000 to 24,000** persons with diabetes in the United States become blind, while more than **42,800** suffer kidney failure and about **82,000** have leg, foot, or toe amputations.¹⁰
- Preventive care such as routine eye and foot examinations, regular self-monitoring of blood glucose, and tight glycemic control could reduce these numbers.
- Early detection of diabetes symptoms and prompt treatment with tight blood glucose control can decrease the chance of developing complications of diabetes.

Data Sources:

- Centers for Disease Control and Prevention. National diabetes fact sheet, 2007.
- American Diabetes Association. All about diabetes, 2008. www.diabetes.org.
- American Diabetes Association. Diabetes 4-1-1: Facts, figures, and statistics at a glance, Alexandria, 2005.
- Georgia BRFSS, 2007.
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- Georgia emergency room visits data file, 2006.
- Georgia Division of Public Health. Death records file, 1999-2006.
- American Diabetes Association. Diabetes cost calculator. www.diabetes.org/cost.
- American Diabetes Association. Economic costs of diabetes in the U.S. in 2007. Diabetes Care, 31:3, 2008.
- Centers for Disease Control and Prevention. Diabetes at a glance, 2005.

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Selected Program Activities

The Georgia Diabetes Coalition

The Georgia Diabetes Coalition (GDC) consists of area health care providers, local public health professionals, Georgians with diabetes, and community leaders. The GDC provides advice and recommendations to the Georgia Diabetes Prevention and Control Program (DPCP) regarding statewide program services, initiatives, and activities. The coalition members review and evaluate initiatives related to diabetes and make recommendations for program interventions.

Diabetes Today Program

This community-based program addresses diabetes-related problems from a public health perspective. The program aims to empower both individuals and groups of people for building linkages in their communities to promote and support diabetes prevention and control efforts.

Drive for Sight Program

Funded by voluntary donations from the driver's license renewal process, this program provides financial support to local vision service providers through several vision projects. The program's activities include diabetes retinopathy screening and early interventions for prevention of blindness and preservation of vision.

Professional Education

In partnership with the Grady Health System, the DPCP offers two workshops and a statewide teleconference especially designed for rural health professionals every year. The workshops cover recent advances in medical treatment, clinical guidelines, patient education, and diabetes management. They also serve as a refresher course for those who are preparing for the certified diabetes educator (CDE) exam. An annual statewide diabetes and cardiovascular conference is also held for area health care providers as part of continuing professional education.

CDE Scholarship Program

Annually, ten scholarships are awarded to eligible candidates as financial assistance for the CDE exam fees or tuitions.

Community Outreach

Collaborating with local professional organizations, the DPCP supports community outreach events such as Diabetes Expo, Victory Over Diabetes, and Diabetes University in metro Atlanta.

If you have diabetes,

Know Your ABCs. Keep them at desirable levels as indicated below.

A – Hemoglobin A1C:	Less than 7%
B – Blood Pressure:	Under 130/80 mmHg
C – Cholesterol: LDL (bad cholesterol):	Below 100 mg/dL
HDL (good cholesterol):	Men – Over 40 mg/dL; Women – Over 50 mg/dL
Triglycerides:	Below 150 mg/dL

Get CHECKED.

Get your blood sugar checked daily or as recommended by your doctor.
Get your A1C checked at least twice a year.
Get your feet checked daily and at all doctor visits.
Get your eyes dilated and checked at least once a year.
Get your urine checked for the protein albumin as needed.

A Few More Tips...

Take medications as prescribed to control your blood sugar.
Receive a flu shot every year and a pneumonia shot as needed.
Maintain a healthy body weight. Lose excess weight if needed.
Even reducing a few pounds (5 to 7% of your body weight) can still make a difference.
Pay attention to and control your blood pressure and cholesterol as required.
Adopt healthy eating habit and follow the meal plan appropriately.
Avoid risk behaviors such as smoking and excess drinking.
Don't smoke. If you do smoke, stop or get help now to quit.
Stay active. Walk, run, swim, dance, or get involved regularly in any kind of physical activity you enjoy.